

SN 09/628,805

Page 2 of 25

IN THE CLAIMS

Please reconsider the claims as follows:

1. (currently amended) A method for locally targeting virtual advertisements at a user's terminal, comprising:

assigning at least one virtual advertisement spot to a video program;

assigning a plurality of virtual objects to the at least one virtual advertisement

spot, wherein assigning the plurality of virtual objects further comprises:

ranking one or more of the video programs based on target categories and a first percentage of total viewers in one or more groups of viewers;

ranking the plurality of virtual objects based on a second percentage of total viewers in the one or more groups of viewers; and

determining, for one or more of the video programs and one or more of the target categories, the plurality of virtual objects with overall highest rankings, based on the first and the second percentages;

generating group assignment rules;

generating a retrieval plan; and

providing the retrieval plan, the group assignment rules and video program to the terminal, wherein the retrieval plan and the group assignment rules are sent periodically to the terminal, and the retrieval plan directs the terminal to select one of the plurality of virtual objects for placement at said at least one virtual advertisement spot in said video program.

2. (original) The method of claim 1, further comprising:

defining one or more target categories; and

for one or more of the target categories, designating one or more groups,

wherein a group is based on common viewer characteristics.

3. (previously presented) The method of claim 2, further comprising assigning the

SN 09/628,805

Page 3 of 25

terminal to one or more of the groups, comprising:

- storing the group assignment rules at the terminal; and
- determining one or more group assignments based on the group assignment rules and data related to the terminal.

4. (previously presented) The method of claim 3, wherein the data related to the terminal includes one or more of Area of Dominant Influence (ADI), zip code+4, demographic data and video programs watched data, virtual objects viewed, on-screen questionnaires and characteristics imported from marketing databases, the group assignments being updated to reflect changes in the ADI, zip code+4, demographic data, video programs watched data, virtual objects viewed, on-screen questionnaires, and characteristics imported from marketing databases.

5. (original) The method of claim 2, wherein generating the retrieval plan comprises:

- designating a unique group mask for one or more of the groups; and
- assigning one or more of the groups to one of the virtual objects, wherein the group mask indicates whether the terminal displays a particular virtual object.

6. (canceled)

7. (currently amended) A method of locally targeting virtual objects, comprising:

- creating categories of virtual objects and video programs;
- within one or more of the categories, defining one or more groups;
- generating group assignment rules based on common viewer characteristics;
- providing the group assignment rules to one or more of the terminals;
- providing a video program containing one or more virtual object locations;
- providing virtual objects for one or more of the virtual object locations;
- providing alternate virtual objects for one or more of the virtual object locations;

SN 09/628,805

Page 4 of 25

and

generating a retrieval plan at one or more of the terminals, wherein the retrieval plan at one or more of the terminals designates which of the one or more virtual object locations displays an alternate virtual object in the video program,

wherein generating the retrieval plan, comprises:

assigning the virtual objects to the one or more virtual object locations;

assigning the alternate virtual objects to at least one of the one or more virtual object locations;

assigning a group to one or more of the virtual objects and the alternate virtual objects, wherein assigning the group to the virtual objects and the alternate virtual objects, comprises:

ranking one or more video programs based on the categories of targeted virtual objects and a first percentage of total viewers who may view the one or more video programs;

ranking the targeted virtual objects based on a second percentage of the total viewers; and

determining, for the one or more ranked video programs and the categories of targeted virtual objects, targeted virtual objects with overall highest rankings, based on the first and the second percentages; and

creating a group mask assignment, wherein the group mask assignment is used at the terminals to compare the retrieval plan to the assignments of the terminals to the groups.

8. (previously presented) The method of claim 7, wherein the video program is a television program.

9. Canceled.

SN 09/628,805

Page 5 of 25

10. (previously presented) The method of claim 7, wherein at least one of the virtual object locations is fixed in position across frames of the video program.

11. (previously presented) The method of claim 7, wherein at least one of the virtual object locations moves spatially in the video program with time.

12. (original) The method of claim 7, wherein at least one of the virtual objects is interactive.

13. (previously presented) The method of claim 7, wherein the video program is broadcast to the terminals, further comprising:

storing the group assignment rules in one or more of the terminals;

using the stored group assignment rules, assigning one or more of the terminals to one or more of the groups; and

comparing the retrieval plan to the group assignments to determine virtual objects to display in the one or more virtual object locations.

14. (canceled)

15. (currently amended) The method of claim 7 ~~14~~, wherein assigning the group to the virtual objects and the alternate virtual objects, further comprises:

~~ranking one or more video programs based on the categories of targeted virtual objects and a first percentage of total viewers who may view the one or more video programs;~~

~~ranking the targeted virtual objects based on a second percentage of the total viewers;~~

~~determining, for the one or more ranked video programs and the categories of targeted virtual objects, targeted virtual objects with overall highest rankings, based on~~

SN 09/628,805

Page 6 of 25

~~the first and the second percentages;~~

assigning targeted virtual objects with the overall highest rankings to be displayed as the virtual objects; and

assigning targeted advertisements with lower overall rankings to be displayed as the alternate virtual objects.

16. (original) The method of claim 13, wherein the common viewer characteristics include viewer demographic information.

17. (original) The method of claim 13, wherein the common viewer characteristics include viewer-entered information.

18. (previously presented) The method of claim 13, wherein the common viewer characteristics include video programs watched data.

19. (original) The method of claim 13, wherein the common viewer characteristics include virtual objects watched data.

20. (original) The method of claim 13, wherein one or more of the virtual object locations contain an interactive virtual object, and wherein the common viewer characteristics include viewer activation of the interactive virtual object.

21. (original) The method of claim 13, wherein the terminals are television set top terminals.

22. (original) The method of claim 13, wherein one or more of the terminals is incorporated into one of a television, a personal computer and a PDA with video viewing capabilities.

399581-1

SN 09/628,805

Page 7 of 25

23. (original) The method of claim 13, wherein one or more of the terminals is a satellite television receiver.

24. (original) The method of claim 13, further comprising:

at one or more of the terminals, recording in a memory an identification of a virtual object displayed in a virtual object location;
providing the identification to a remote site; and
deleting the identification from the memory.

25. (currently amended) A method of locally targeting virtual objects to terminals, comprising:

creating a package of targeted virtual objects, comprising:

ranking one or more video programs based on target categories of targeted virtual objects and a first percentage of total viewers in one or more groups of viewers;

ranking the targeted virtual objects based on a second percentage of total viewers in the one or more groups of viewers; and

determining, for one or more of the video programs and one or more of the target categories, targeted virtual objects with overall highest rankings, based on the first and the second percentages;

providing the package to one or more of the terminals;

generating group assignment rules;

providing the group assignment rules to one or more of the terminals;

generating a retrieval plan;

storing the retrieval plan at one or more of the terminals; and

providing a video program to one or more of the terminals, the video program including at least one virtual object location, wherein the retrieval plan designates virtual

399581-1

SN 09/628,805

Page 8 of 25

objects to be displayed during a display of the video program.

26. (previously presented) The method of claim 25, further comprising:

- storing the group assignment rules at one or more of the terminals; and
- creating group assignments by assigning one or more of the terminals to one or more groups based on the group assignment rules.

27. (previously presented) The method of claim 26, further comprising at one or more of the terminals receiving the video program, retrieving one of the targeted virtual objects for display in the at least one virtual object location.

28. (original) The method of claim 27, wherein the retrieval step, comprises:

- comparing the group assignments to the retrieval plan; and
- selecting a virtual object for display based on the comparison.

29. (original) The method of claim 26, wherein one or more of at least one virtual object locations contains an interactive virtual object, further comprising:

- receiving a selection of the interactive virtual object; and
- linking a terminal selecting the interactive virtual object to an alternate program.

30. (original) The method of claim 29, wherein the alternative program comprises an Internet web site.

31. (original) The method of claim 26, wherein the step of creating the group assignments comprises analyzing individual terminal data and terminal group data.

32. (original) The method of claim 31, wherein the individual terminal data comprises one or more of viewer demographic data, programs watched data, virtual objects

399581-1

SN 09/628,805

Page 9 of 25

viewed data, on-screen questionnaires, and characteristics imported from marketing databases, and wherein the terminal group data, comprises one or more of ADI, zip code, and geographical data.

33. (original) The method of claim 31, wherein one or more of the terminals comprises a global positioning satellite receiver, further comprising:

determining a geographical location of one or more of the terminals; and

storing the geographical location of the one or more of the terminals as individual terminal data.

34. (previously presented) A method for assigning targeted virtual objects to virtual object locations in one or more video programs, comprising:

identifying the one or more video programs to carry the targeted virtual objects;

assigning the targeted virtual objects to target categories;

ranking one or more of the video programs based on the target categories and a first percentage of total viewers in one or more groups of viewers;

ranking the targeted virtual objects based on a second percentage of total viewers in the one or more groups of viewers;

determining, for one or more of the video programs and one or more of the target categories, targeted virtual objects with overall highest rankings, based on the first and the second percentages;

assigning one or more targeted virtual objects as default virtual objects;

assigning one or more targeted virtual objects as alternate virtual objects; and

assigning the default virtual objects and the alternate virtual objects to the virtual object locations.

35. (original) The method of claim 34, wherein the first and second percentages of total viewers are based on viewer demographic information including zip code, ADI and

399581-1

SN 09/628,805

Page 10 of 25

geographical data.

36. (previously presented) The method of claim 34, wherein assigning the default virtual objects and the alternate virtual objects, comprises:

- dividing one or more target categories into groups;

- generating group assignment rules that are used to assign or more of the terminals to one or more of the groups;

- storing the group assignment rules at one or more of the terminals, wherein processors at the one or more terminals assign the terminals to one or more groups using the group assignment rules;

- generating a retrieval plan; and

- providing the retrieval plan to one or more of the terminals receiving the video programs at the one or more terminals, comparing the group assignments to the retrieval plan.

37. (original) The method of claim 36, further comprising:

- revising the retrieval plan and the group assignment rules; and

- providing the revised retrieval plan and the revised group assignment rules to the one or more terminals.

38. (original) The method of claim 36, wherein the retrieval plan and the group assignment rules are provided over an Internet.

39. (original) The method of claim 34, wherein the package of targeted virtual objects is provided to a terminal over an Internet.

40. (original) The method of claim 34, wherein the package of targeted virtual objects is provided to a terminal using one of a public switched telephone network, a cable

399581-1

SN 09/628,805

Page 11 of 25

television network, a satellite television network, a local area network and a fiber optic network.

41. (original) The method of claim 34, wherein virtual objects are provided with program content.

42. (original) The method of claim 34, wherein virtual objects are provided independently of program content.

43. (currently amended) A method for locally targeting virtual objects to subscribers in a television program delivery system, comprising:

identifying the one or more video programs to carry targeted virtual objects;

assigning the targeted virtual objects to target categories;

ranking one or more of the video programs based on the target categories and a first percentage of total viewers in one or more groups of viewers;

ranking the targeted virtual objects based on a second percentage of total viewers in the one or more groups of viewers;

determining, for one or more of the video programs and one or more of the target categories, targeted virtual objects with overall highest rankings, based on the first and the second percentages;

gathering information related to a plurality of subscribers, wherein individual subscriber's information is gathered and stored at individual subscriber's terminals;

analyzing the gathered information to determine a subscriber profile for one of the plurality of subscribers;

correlating the subscriber profile with categories of virtual objects, wherein one or more virtual object categories includes targeted ~~at least one~~ virtual objects; and

selecting from the correlated virtual objects for placement in the one or more of the ~~a~~ video programs based on an optimum placement determination.

399581-1

SN 09/628,805
Page 12 of 25

44. (original) The method of claim 43, wherein the individual subscriber's information includes virtual objects watched data.

45. (original) The method of claim 43, further comprising defining virtual object locations, wherein the virtual objects are displayed in the virtual object locations.

46. (original) The method of claim 45, wherein the virtual object locations are defined in a television program.

47. (original) The method of claim 45, wherein the virtual object locations are defined in an advertisement provided over a television delivery system.

Claims 48-50. Canceled.

51. (currently amended) A routine, executable on a general purpose computer, for targeting virtual objects to an individual viewer, the routine, comprising:

- a group definition routine that defines groups based on common viewer characteristics;

- a group assignment routine that assigns individual viewer terminals to one or more of the groups;

- a virtual object location routine that determines available virtual object locations in a video program; and

- a retrieval plan generator that generates a plan for retrieving one or more virtual objects for display in one or more of the available virtual object locations, wherein the retrieval plan is generated based on the group definitions, and the one or more virtual objects is assigned comprising:

- ranking one or more of the video programs based on target categories of

399581-1

SN 09/628,805

Page 13 of 25

targeted virtual objects and a first percentage of total viewers in one or more groups of viewers;

ranking the virtual objects based on a second percentage of total viewers in the one or more groups of viewers; and

determining, for one or more of the video programs and one or more of the target categories, targeted virtual objects with overall highest rankings, based on the first and the second percentages; and

a delivery processor that sends group assignment rules to the individual viewer terminals.

52. Canceled.

53. (currently amended) A method for targeting virtual objects to locations in a video program, comprising:

at a local viewer terminal, identifying virtual objects for insertion into one or more of the locations in the video program, wherein the identified virtual objects is assigned comprising the steps of:

ranking one or more of the video programs based on target categories and a first percentage of total viewers in one or more groups of viewers;

ranking the virtual objects based on a second percentage of total viewers in the one or more groups of viewers; and

determining, for one or more of the video programs and one or more of the target categories, identified virtual objects with overall highest rankings, based on the first and the second percentages;

generating an individual viewer profile; and

providing one or more of the identified virtual objects for insertion at least partially based on the individual viewer profile and group assignment rules, wherein the group assignment rules are provided by a remote location to the local viewer terminal.

399581-1

SN 09/628,805

Page 14 of 25

54. (currently amended) A method for targeting virtual objects to terminals, comprising:

- identifying the terminals based on viewing characteristics of individual terminals;
- identifying virtual object locations in video programs for display at the terminals;
- and
- targeting the virtual objects for insertion into the virtual object locations based on the identities of the terminals, wherein the targeted virtual objects is assigned comprising the steps of:
 - ranking one or more of the video programs based on target categories and a first percentage of total viewers in one or more groups of viewers;
 - ranking the targeted virtual objects based on a second percentage of total viewers in the one or more groups of viewers; and
 - determining, for one or more of the video programs and one or more of the target categories, targeted virtual objects with overall highest rankings, based on the first and the second percentages.

55. (previously presented) The method of claim 54, further comprising displaying multiple virtual objects simultaneously at the identified terminals.

56. (previously presented) The method of claim 54, wherein one or more of the virtual objects are interactive virtual objects, further comprising:

- receiving a selection of one or more of the interactive virtual objects from one or more of the terminals;
- linking the selecting terminal to a remote location; and
- displaying video content from the remote location at the selecting terminal.

57. (original) The method of claim 56, wherein the remote location is an operations

SN 09/628,805

Page 15 of 25

center and the content is an additional program.

58. (original) The method of claim 56, wherein the remote location is an Internet web site and the content is one or more web pages.

59. (currently amended) A terminal in a television program delivery system that targets virtual objects for display to a viewer of the terminal, comprising:

a receiver that receives group assignment rules and video programs containing virtual object locations, virtual objects, and a virtual object retrieval plan, wherein the virtual objects is assigned comprising the steps of:

ranking one or more of the video programs based on target categories and a first percentage of total viewers in one or more groups of viewers;

ranking the virtual objects based on a second percentage of total viewers in the one or more groups of viewers; and

determining, for one or more of the video programs and one or more of the target categories, virtual objects with overall highest rankings, based on the first and the second percentages;

a memory that stores the group assignment rules and the virtual object retrieval plan; and

a processor that executes a group assignment routine using the group assignment rules and data related to the terminal to assign the terminal to one or more groups, wherein the groups are defined based on common viewer characteristics, and executes a virtual object assignment routine that assigns virtual objects to the virtual object locations based on a comparison of the retrieval plan and the group assignments.

60. (original) The terminal of claim 59, wherein the group assignment rules include an initial set of group assignment rules stored in the memory.

399581-1

SN 09/628,805

Page 16 of 25

61. (canceled)

62. (previously presented) The terminal of claim 59, wherein the data related to the terminal is stored in the memory, the data related to the terminal including internal information generated internally at the terminal and external information generated external to the terminal and provided to the terminal.

63. (original) The terminal of claim 62, wherein the terminal further comprises a global positioning satellite (GPS) receiver, the GPS receiver determining a location of the terminal, wherein the location is stored in the memory as internal information, and wherein the processor uses the location to determine area of dominant influence and postal code information.

64. (previously presented) The terminal of claim 62, wherein the internal information includes programs watched information and virtual objects viewed information for video programs and virtual objects displayed at the terminal.

65. (previously presented) The terminal of claim 59, wherein the group assignment rules are periodically revised, the memory storing the revised group assignment rules and the processor determining revised group assignments based on the revised group assignment rules.

66. (previously presented) The terminal of claim 59, wherein the data related to the terminal is revised, the processor determining revised group assignments based on the revised data related to the terminal.

67. (previously presented) The terminal of claim 59, wherein the processor uses the

399581-1

SN 09/628,805

Page 17 of 25

group assignment rules to derive terminal identifying information based on other information stored at the terminal.

68. (currently amended) A method for assigning targeted virtual objects to virtual object locations in one or more video programs, comprising:

identifying the one or more video programs to carry the targeted virtual objects;

ranking the one or more of the video programs based on target categories of targeted virtual objects and a first percentage of total viewers in one or more groups of viewers;

ranking the targeted virtual objects based on a second percentage of total viewers in the one or more groups of viewers;

assigning the targeted virtual objects to target categories and to groups within the target categories;

generating virtual object location group percentage breakdowns, wherein the generating step comprises using generic viewing population information to assign the groups to the one or more video programs;

creating virtual object ranking percentages based on the generic viewing population information;

determining, for one or more of the video programs and one or more of the target categories, targeted virtual objects with overall highest ranking percentages, based on the first and the second percentages and group percentage breakdowns; and

assigning virtual objects to the virtual object locations based on the determined ranking percentages and group percentage breakdowns.

69. (currently amended) A method of targeting virtual objects to terminals, comprising:

identifying virtual objects;

providing the one or more of the virtual objects to one or more of the terminals, wherein the virtual objects is assigned for providing comprising:

399581-1

SN 09/628,805

Page 18 of 25

ranking one or more of the video programs based on target categories and a first percentage of total viewers in one or more groups of viewers;

ranking the virtual objects based on a second percentage of total viewers in the one or more groups of viewers; and

determining, for one or more of the video programs and one or more of the target categories, the virtual objects with overall highest rankings, based on the first and the second percentages;

generating group assignment rules;

providing the group assignment rules to one or more of the terminals;

generating a retrieval plan;

storing the retrieval plan at one or more of the terminals; and

providing a video program to one or more of the terminals, the video program including at least one virtual object location, wherein the retrieval plan designates virtual objects to be displayed during a display of the video program.

70. (previously presented) The method of claim 69, further comprising:

storing the group assignment rules at one or more of the terminals; and

creating group assignments by assigning one or more of the terminals to one or more groups based on the group assignment rules.

71. (original) The method of claim 70, wherein the step of generating group assignment rules comprises generating initial group assignment rules, and wherein the step of storing the group assignment rules comprises storing the initial group assignment rules.

72. (original) The method of claim 71, wherein the initial group assignment rules are stored at or before an initial use of a terminal.

73. (previously presented) The method of claim 70, further comprising at one or more of

SN 09/628,805

Page 19 of 25

the terminals receiving the video program, retrieving one of the targeted virtual objects for display in the at least one virtual object location.

74. (original) The method of claim 73, wherein the retrieval step, comprises:

- comparing the group assignments to the retrieval plan; and
- selecting a virtual object for display based on the comparison.

75. (original) The method of claim 70, wherein one or more of at least one virtual object locations contains an interactive virtual object, further comprising:

- receiving a selection of the interactive virtual object; and
- linking a terminal selecting the interactive virtual object to an alternate program.

76. (original) The method of claim 70, wherein the group assignment rules are provided to a terminal using one of a public switched telephone network, a cable television network, a satellite television network, a local area network, a fiber optic network and an Internet.

77. (original) The method of claim 69, wherein the virtual objects are provided to a terminal using one of a public switched telephone network, a cable television network, a satellite television network, a local area network, a fiber optic network and an Internet.

78. (original) The method of claim 69, wherein the retrieval plan is provided to a terminal using one of a public switched telephone network, a cable television network, a satellite television network, a local area network, a fiber optic network and an Internet.